There are also inevitable burdens and risks for the surgeon, which are rarely discussed. The inherent strain of performing operations on patients who are seriously ill takes a toll that is generally underemphasized or dissembled. Surgeons worry, usually constructively. They have regrets and bad dreams about choices and interventions that they have made. The responsibility for decisions as well as incisions is uniquely intensified by the immediacy of the surgeon-patient relationship. Surgeons give their informed consent to take on these burdens and risks. When they share their concerns, "Here's what I'll be worried about," and give realistic assurance, "Here's what we'll do to manage it," they are managing their own as well as their patients' expectations and fears. They make a decision to trust their patient to do all that is required for both of them to come through the ordeal of surgery successfully.

Besides these burdens, surgeons risk loss of reputation, even loss of privileges to operate, when they make errors in judgment or technique. The silent grief that passes over the room at the time of an intraoperative death is uniquely focused on the operating surgeon. Heroic surgeons like Norman Bethune have contracted lethal or career-ending illnesses in the course of operating on infected patients.

Martinus Spoor was a staff cardiothoracic surgeon, a hockey player, and violinist. He was the father of three, as was resident cardiothoracic surgeon David Ashburn. Transplant donation specialist Richard Chenault II was a high school coach and father of two. Specialist Rick Lapensee was an emergency medical technician and firefighter. Pilot Bill Serra received the US Air Medal for his support as a civilian pilot during Operation Desert Storm. Pilot Dennis Hoyes leaves five children behind. Mechanical problems were thought to be the cause of the crash according to the National Transportation Safety Board. The recipient patient, whose chest was already open when the plane went down, was moved to the top of the priority list and successfully received a transplant 2 days later at the hands of a grief-stricken but resolute surgical team.

Readers who would like to learn more or contribute to the education funds for the children of these lost heroes can do so through the following Web site: http://www.med.umich.edu/survival_flight/update/

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Reference

1. Shuhaiber JH. Tribute to our fallen comrades. *J Thorac Cardiovasc Surg*. 2008;135:1197.

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Reply to the Editor:

With every operation performed comes a period of time where we stand face to face with the patient or responsible informant explaining the indication for the surgical procedure we would like to conduct. The period is usually one in which the responsible surgeon needs to be aware of the potential complications weighted against the benefits aimed to be achieved in the context of his or her own skills and available capacity. Dr McKneally comments elegantly and thoughtfully on the editorial ''Tribute to our Fallen Comrades''[1] that the risks are collective for all; surgeon, patient and family, training resident, as well as allied staff and institution. The surgeon is the ultimate person who will take the blame and hold the fort against any risk or complication(s). The primary goal is always to do the job with outmost concern for every detail, ensuring that patient returns to his or her loved ones with the underlying problem treated. This consent period could last from minutes to hours, exploring various avenues, reflecting on past experiences, as well as involving other opinions and recruiting from other resources.

Providing consent with quantifying and qualifying estimates is risky by itself. Two broad domains that underpin the consent process are communication and perception. Communication influences how we perceive information and perception modifies our responses and so affects our communication. This process occurs in both patient and surgeon. Perceiving that the patient will be fine with a procedure we are familiar with makes us comfortable in providing risk estimates. However, when communication and/or perceptions loops remain unclosed, this can send messages altering the perception of patient and surgeon of what can or cannot be ''guaranteed'' or perceived ''worthy of mention.'' These subtle issues about communication and perception vary all the time, exacerbating the risk of miscommunication, which could extend to the tragic death of the organ retrieval team, which could not have been predicted.

In the age of technology with limited time and excess knowledge, trainees are battling through the basics of cardiothoracic surgery during residency. Beside their duties, they need to know how to manage patients and obtain consent for their treatment. Surgical procedures involve more and more recent technology (eg, monitors, imaging instruments, and cellular material) in the surgical environment and beyond (eg, transportation-related services and nanotechnology). It is not uncommon to find a proportion of residents, including fellows, consenting for procedures in which they have never participated or whose process they do not fully understand. This by itself is a risk to them, their team, and their patients, especially when miscommunication can occur. Furthermore, to knowingly or unknowingly exclude the hazards of the associated technology or devices involved is of growing concern.

Similar to advances in our field, the consent process needs to advance and develop. It is also key to understand ourselves better by reflection of our knowledge of surgical management and an opportunity to learn what is up-to-date management for that particular pathologic condition. We should pay more attention to this in our practice. Of course, we cannot explain all risks, alternatives, and benefits, but we must have some understanding of known and unknown risks conveyed to the patient and to the surgical team. Such an unknown factor could extend to the tragic death of the organ retrieval team, which could not have been predicted.

I would not be surprised that we will be facing more unknown risks as we advance and introduce more technology into our field. It is our responsibility, therefore, to understand this process fully and share this with our patients. Surgical programs should share their expertise by teaching the next surgical generation aspects of patient and surgical consent to reduce its evolving limitations. Finally, we act by what we know; thus, unknowingly misinformed can be worse than not being informed at all.

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1. Shuhaiber JH. Tribute to our fallen comrades. *J Thorac Cardiovasc Surg*. 2008;135:1197.

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